

REMARKS

Claims 1-35 were examined and reported in the Office Action. Claims 1-22 and 29-35 are rejected. Claims 2 and 36 are canceled. Claims 1 and 5 are amended. New claim 37 is added. Claim 36 was inadvertently removed from the last two responses. Since it is asserted in the Office Action that only claims 1-35 are examined, Applicant cancels claim 36 and adds claim 37 to correctly list the pending claims. Claims 1 and 3-35 and 37 remain.

Applicant requests reconsideration of the application in view of the following remarks.

I. 35 U.S.C. § 102(b)

It is asserted in the Office Action that claims 1-7, 16, 17, 20, 21, 30, 33 and 34 are rejected under 35 U.S.C. §102 (b), as being anticipated by U. S. Patent No. 5,869,208 issued to Miyasaka ("Miyasaka"). Applicant respectfully traverses the aforementioned rejection for the following reasons.

According to MPEP §2131, "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.' (Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)). 'The identical invention must be shown in as complete detail as is contained in the ... claim.' (Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)). The elements must be arranged as required by the claim, but this is not an ipsissimis verbis test, *i.e.*, identity of terminology is not required. (In re Bond, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990))."

Applicant's amended claim 1 contains the limitations of "[a] positive active material slurry composition comprising: a physical mixture of a positive active material comprising a lithiated transition metal compound, and an additive, said additive at least one of Si, B, Ti, Ga, Ge, Ca, Mg, Sr and Ba; a binder; a carbon conductive agent; and an organic solvent, wherein said positive active material composition is prepared by

physically mixing said positive active material, said binder in said organic solvent in a form of slurry.”

Applicant’s amended claim 5 contains the limitations of “[a] method of preparing a positive electrode for a rechargeable lithium battery comprising the steps of: physically mixing a positive active material with an additive, the positive active material being selected from the group consisting of lithiated transition metals, and the additive at least one of Si, B, Ti, Ga, Ge, Ca, Mg, Sr and Ba; adding an organic solvent, a binder, and a carbon conductive agent to the mixture to prepare a positive active material slurry composition; coating the positive active material composition on a current collector; and drying the current collector coated with the positive active material slurry composition.”

Miyasaka discloses a lithium ion secondary battery. It is asserted in the Office Action that the mixture disclosed in Miyasaka has a powder metal including nickel or aluminum. Applicant asserts amended claims 1 and 5 contain the limitation of “the additive at least one of Si, B, Ti, Ga, Ge, Ca, Mg, Sr and Ba,” which does not contain the element Al. Miyasaka does not teach, disclose or suggest Applicant’s limitations of “the additive at least one of Si, B, Ti, Ga, Ge, Ca, Mg, Sr and Ba.”

Further, Applicant notes that Miyasaka uses Al as an electro-conductive material. Applicant does not use the additive (at least one of Si, B, Ti, Ga, Ge, Ca, Mg, Sr and Ba) as an electro-conductive material. Therefore, the use of the material in Miyasaka is distinguishable from that of Applicant’s.

Therefore, since Miyasaka does not disclose, teach or suggest all of Applicant’s amended claims 1 and 5 limitations, Applicant respectfully asserts that a *prima facie* rejection under 35 U.S.C. § 102(b) has not been adequately set forth relative to Miyasaka. Thus, Applicant’s amended claims 1 and 5 are not anticipated by Miyasaka. Additionally, the claims that directly or indirectly depend on claims 1 and 5, namely claims 3, 4, 16, 17, 20, 21, and 6, 7 and 30, 33 and 34, respectively, are also not anticipated by Miyasaka for the same reason.

Accordingly, withdrawal of the 35 U.S.C. § 102(b) rejections for claims 1-7, 16, 17, 20, 21, 30, 33 and 34 are respectfully requested.

II. 35 U.S.C. § 103

A. It is asserted in the Office Action that Claims 1-7, 16, 17, 20, 21, 29, 30, 33 and 34 are rejected in the Office Action under 35 U.S.C. § 103(a), as being unpatentable over U. S. Patent No. 5,851, 696 issued to Saidi et al. ("Saidi"), in view of U.S. Patent Application No. 6,153,338 issued to Gan ("Gan"). Applicant respectfully traverses the aforementioned rejection for the following reasons.

According to MPEP §2142 "[t]o establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure." (*In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)). Further, according to MPEP §2143.03, "[t]o establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. (*In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974))." "*All words in a claim must be considered in judging the patentability of that claim against the prior art.*" (*In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970), emphasis added.)

Applicant's amended claim 1 contains the limitations of "[a] positive active material slurry composition comprising: a physical mixture of a positive active material comprising a lithiated transition metal compound, and an additive, said additive at least one of Si, B, Ti, Ga, Ge, Ca, Mg, Sr and Ba; a binder; a carbon conductive agent; and an organic solvent, wherein said positive active material composition is prepared by physically mixing said positive active material, said binder in said organic solvent in a form of slurry."

Applicant's amended claim 5 contains the limitations of "[a] method of preparing a positive electrode for a rechargeable lithium battery comprising the steps of: physically mixing a positive active material with an additive, the positive active

material being selected from the group consisting of lithiated transition metals, and the additive at least one of Si, B, Ti, Ga, Ge, Ca, Mg, Sr and Ba; adding an organic solvent, a binder, and a carbon conductive agent to the mixture to prepare a positive active material slurry composition; coating the positive active material composition on a current collector; and drying the current collector coated with the positive active material slurry composition."

Saidi discloses a rechargeable lithium battery. Saidi, however, does not teach, disclose or suggest the additive at least one of Si, B, Ti, Ga, Ge, Ca, Mg, Sr and Ba.

Gan discloses an alkali metal secondary electrochemical cell. Gan, however, does not teach, disclose or suggest the additive at least one of Si, B, Ti, Ga, Ge, Ca, Mg, Sr and Ba.

Further, Applicant notes that Gan uses Ni and Al as an electro-conductive material. Applicant does not use the additive (at least one of Si, B, Ti, Ga, Ge, Ca, Mg, Sr and Ba) as an electro-conductive material. And, even though Applicant originally disclosed the use of Al as an additive, that use was not as an electro-conductive material. Therefore, the use of the material in Gan is distinguishable from that of Applicant's.

Therefore, even if Saidi were combined with Gan, the resulting invention would still not include all of Applicant's claimed limitations. And, therefore, there would be no motivation to combine Saidi with Gan.

Neither Saidi, Gan, nor the combination of the two, teach, disclose or suggest the limitations contained in Applicant's amended claims 1 and 5, as listed above. Since neither Saidi, Gan, nor the combination of the two, teach, disclose or suggest all the limitations of Applicant's amended claims 1 and 5, as listed above, there would not be any motivation to arrive at Applicant's claimed invention. Thus, Applicant's amended claims 1 and 5 are not obvious over Saidi in view of Gan since a *prima facie* case of obviousness has not been met under MPEP §2142. Additionally, the claims that directly or indirectly depend from amended claims 1 and 5, namely 3, 4, 8, 16-17, 20-21 and 29,

and 6, 7, 9 and 30, 33 and 34, respectively, would also not be obvious over Saidi in view of Gan for the same reason.

Accordingly, withdrawal of the 35 U.S.C. § 103(a) rejections for claims 1-7, 16, 17, 20, 21, 29, 30, 33 and 34 are respectfully requested.

B. It is asserted in the Office Action that Claims 22 and 35 are rejected in the Office Action under 35 U.S.C. § 103(a), as being unpatentable over Saidi, in view of Gan, and further in view of Matsubara (U.S. Pub. 2001/0010807). Applicant respectfully traverses the aforementioned rejection for the following reasons.

Applicant's claim 22 directly depends on amended claim 1. Applicant's claim 35 directly depends on amended claim 5. Applicant has addressed the rejections of claims 1 and 5 regarding Saidi in view of Gan above in section II(A).

Matsubara discloses a lithium nickel cobalt complex oxide and a positive electrode active material for a secondary battery. Matsubara is relied on in the Office Action for teaching "it is conventional to employ lithium nickel/cobalt oxides of the formula $\text{Li}_y\text{Ni}_{1-x}\text{Co}_x\text{M}_{x2}\text{O}_2$ were (*sic.*) M is Al, Fe, Mn where y is $0.9 < y < 1.3$ and $0 < x < 0.5$." (Office Action, page 7). Matsubara, however, does not teach, disclose or suggest the additive at least one of Si, B, Ti, Ga, Ge, Ca, Mg, Sr and Ba.

Further, Applicant notes that if Saidi and Gan were combined with Matsubara, the combined result would use Ni and Al as an electro-conductive material. Applicant does not use the additive (at least one of Si, B, Ti, Ga, Ge, Ca, Mg, Sr and Ba) as an electro-conductive material. And, even though Applicant originally disclosed the use of Al as an additive, that use was not as an electro-conductive material. Therefore, the use of the material in a result of combining Saidi with Gan and Matsubara is distinguishable from that of Applicant's.

Neither Saidi, Gan, Matsubara, nor the combination of the three, teach, disclose or suggest the limitations contained in Applicant's amended claims 1 and 5, as listed above. Since neither Saidi, Gan, Matsubara, nor the combination of the three, teach, disclose or suggest all the limitations of Applicant's amended claims 1 and 5, as listed above, there would not be any motivation to arrive at Applicant's claimed invention.

Thus, Applicant's amended claims 1 and 5 are not obvious over Saidi in view of Gan and Matsubara since a *prima facie* case of obviousness has not been met under MPEP §2142. Additionally, the claims that directly or indirectly depend from amended claims 1 and 5, namely 22, and 35, respectively, would also not be obvious over Saidi in view of Gan and Matsubara for the same reason.

Accordingly, withdrawal of the 35 U.S.C. § 103(a) rejections for claims 22 and 35 are respectfully requested.

C. It is asserted in the Office Action that Claims 1-9, 16-19 and 29-32 are rejected in the Office Action under 35 U.S.C. § 103(a), as being unpatentable over U. S. Patent No. 6,589,694 issued to Goshu et al. ("Goshu"), and further in view of Gan. Applicant respectfully traverses the aforementioned rejection for the following reasons.

Applicant has addressed Gan regarding claims 1 and 5 above in sections II(A)-(B).

Goshu discloses a positive and negative electrode active material and electrolyte used to improve a charging/discharging cycle. Goshu, however, does not teach, disclose or suggest the additive at least one of Si, B, Ti, Ga, Ge, Ca, Mg, Sr and Ba.

Further, Applicant notes that if Goshu and Gan were combined, the combined result would use Ni and Al as an electro-conductive material. Applicant does not use the additive (at least one of Si, B, Ti, Ga, Ge, Ca, Mg, Sr and Ba) as an electro-conductive material. And, even though Applicant originally disclosed the use of Al as an additive, that use was not as an electro-conductive material. Therefore, the use of the material in a result of combining Goshu with Gan is distinguishable from that of Applicant's.

Neither Goshu, Gan, nor the combination of the two, teach, disclose or suggest the limitations contained in Applicant's amended claims 1 and 5, as listed above. Since neither Goshu, Gan, nor the combination of the three, two, disclose or suggest all the limitations of Applicant's amended claims 1 and 5, as listed above, there would not be any motivation to arrive at Applicant's claimed invention. Thus, Applicant's amended claims 1 and 5 are not obvious over Goshu in view of Gan since a *prima facie* case of obviousness has not been met under MPEP §2142. Additionally, the claims that directly

or indirectly depend from amended claims 1 and 5, namely 3, 4, 8, 16-19, and 29, and 6, 7, 9 and 30-32, respectively, would also not be obvious over Gosho in view of Gan for the same reason.

Accordingly, withdrawal of the 35 U.S.C. § 103(a) rejections for claims 1-9, 16-19, and 29-32 are respectfully requested.

CONCLUSION

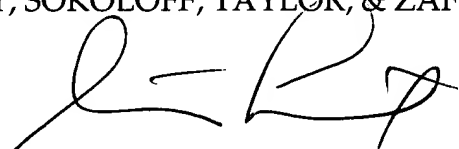
In view of the foregoing, it is submitted that claims 1 and 3-35 and 37 patentably define the subject invention over the cited references of record, and are in condition for allowance and such action is earnestly solicited at the earliest possible date. If the Examiner believes a telephone conference would be useful in moving the case forward, he is encouraged to contact the undersigned at (310) 207-3800.

If necessary, the Commissioner is hereby authorized in this, concurrent and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§1.16 or 1.17, particularly, extension of time fees.

Respectfully submitted,

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